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BRIEFING OF

I. Background of problem

A. Geodetic control provides a network of points on the earth's surface to serve as reference points for all features, for civilian requirements and military operations.

1. Provides reference points for large-scale topographic maps
 - a. Essential to accuracy of artillery fire control
 - b. Nuclear weapons require even greater accuracies because fewer number of rounds available
2. Essential -- and becoming more so -- for accurate referencing of bombing targets
 - a. For manned bombers -- high speed low-level operations require accuracies previously not required
 - b. For ballistic weapons systems -- 1,000-foot accuracies specified
 - (1) USAF
 - (2) Navy Polaris
3. Provides control for positioning of aerial photography; especially critical for satellite photography

B. Problem of varied Service interests

1. Army follows more rigorous geodetic standards to satisfy requirements for topographic mapping to fulfill higher accuracies for nuclear artillery and short-range missiles
2. USAF has less stringent accuracy requirements for larger weapons systems -- \pm 1,000-foot error tolerances

3. Navy has requirements similar to USAF for Polaris; has added problem for gravity data at sea for positioning of launch submarines, and for inertial navigation.
- C. Availability and quality of maps and geodetic control of basic importance to planners
 1. Only small proportion of continents covered by maps and triangulation
 - a. Areas covered not of uniform quality
 2. Provides measure of accuracy and resultant weapon yield expectancy for bombing operations in Sino-Soviet Bloc
 - a. Of interest to Theater and Headquarters Commands
 - b. Essential to briefing officers
 3. Prospect of local wars in underdeveloped areas requires advanced indication of expected effectiveness of bombing, and artillery fire control for ground operations.
 - a. Accuracies become a factor in weighing tactical operational alternatives at outbreak of hostilities
 - b. A study would outline areas where effectiveness is low for which corrective post-hostilities operational planning is required
 - (1) For ground operations: to plan survey and mapping operations for establishing local datum for artillery fire control at 1:25,000 scale.
 - (2) For planning aerial mapping which cannot begin until after hostilities commence

II. The NIS Problem

- A. Elimination of geodetic summary evaluation from Chapter IX leaves gap

1. Chapter IX previously conceived as scientific summary; was more properly in scope of Chapter VII
 2. Chapter VII is scientific in focus; does not consider practical application to targeting
 3. ACSI proposal too limited: would only provide status of US availability of geodetic data without sufficient regard to explicit target positioning
- B. Proposed concept for development of summary evaluation of geodetic adequacy for target positioning requirements
1. Summary evaluation of status of geodetic positioning
 - a. As completed by a given country
 - b. Contrasted to US (or Allied) holdings
 2. Summary of effect of US holdings on geodetic target accuracies
 3. Names and addresses of sources of geodetic data and maps in critical countries
 - a. Purpose is to provide planners with location of native sources for geodetic data and maps for immediate collection after these are overrun by US forces
 - b. Objective is to provide general guidance to secure geodetic position values for operational command use at earliest possible moment in order to improve accuracies
 - c. For use by Theater intelligence for procurement before and after hostilities
 4. Outline of basic technical data required for upgrading of positioning accuracies that may be obtainable by Theater command immediately after outbreak of hostilities

C. Problem of treatment in NIS

1. World-wide supplement vs. Country

- a. World-wide: comprehensive, more timely. More easily protected from security point of view

- (1) Details to be presented by critical regions or countries in sub-sections which can be revised as individual units

2. Problem of production of individual Service contributions

- a. Army: more stringent accuracy requirements excludes certain data which USAF can use. Leads to differences in judgment of suitability.
- b. USAF (ACIC) has large organization tailored to less stringent requirements. Collects and uses data that are unacceptable to Army.
- c. Navy (HO), competent but effort not focussed to geodetic data collection and analysis as is Army or USAF. HO concentrating on gravity data at sea for inertial navigation and for location of underwater ocean bottom features for positioning launch points for submarines.
- d. New inter-service target agency recently created -- Joint Strategic Target Planning Agency (JSTPA) under SAC. Will have future impact on resolving differences in target selection and accuracies.

3. Suggested allocation of production responsibilities difficult

- a. Army to prepare basic contribution on surveys completed in each foreign country; and coverage of data available to US.

- (1) Coordination with USAF necessary to combine each services results.

- b. USAF to prepare gravity coverage on land; Navy (HO) to prepare gravity coverage of the oceans.
- c. USAF to prepare map of target positioning accuracies
- d. Coordination by Joint Strategic Target Planning Agency, SAC.